This Raw Listing contains the General Information Section and up to first 5 pages.

ENTERED

<110> APPLICANT: Hanson, Andrew D.
Nuccio, Michael L.
Henry, Susan A.
<120> TITLE OF INVENTION: POLYNUCLEOTIDE COMPOSITIONS ENCODING S-ADENOSYL-L-METHIONINE: PHOSPHOETHANOLAMINE N-METHYLTRANSFERASE AND METHODS FOR MODULATING LIPID BIOSYNTHESIS IN PLANTS
<130> FILE REFERENCE: 4300.012700
<140> CURRENT APPLICATION NUMBER: US/09/525,885
<141> CURRENT FILING DATE: 2000-03-15
<160> NUMBER OF SEQ ID NOS: 8
<170> SOFTWARE: PatentIn Ver. 2.1
<210> SEQ ID NO 1
<211> LENGTH: 2235
<212> TYPE: DNA
<213> ORGANISM: Spinacia oleracea
<400> SEQUENCE: 1

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<210> SEQ ID NO 2
<211> LENGTH: 494
<212> TYPE: PRT
<213> ORGANISM: Spinacia oleracea
<400> SEQUENCE: 2

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35 40 45
Leu Ser Met Leu Pro Pro Tyr Glu Gly Lys Ser Val Leu Glu Leu Gly
50 55 60
Ala Gly Ile Gly Arg Phe Thr Gly Glu Leu Ala Glu Lys Ala Ser Gln
65 70 75 80
Val Ile Ala Leu Asp Phe Ile Glu Ser Val Ile Lys Lys Asn Glu Ser
85 90 95
Ile Asn Gly His Tyr Lys Asn Val Lys Phe Met Cys Ala Asp Val Thr
100 105 110
Ser Pro Ser Leu Asn Ile Ser Pro Asn Ser Val Asp Ile Ile Phe Ser
115 120 125
Asn Trp Leu Leu Met Tyr Leu Ser Asp Glu Glu Val Glu Arg Leu Val
130 135 140
Glu Arg Met Leu Lys Trp Leu Lys Pro Gly Gly Tyr Ile Phe Phe Arg
145 150 155 160
Glu Ser Cys Phe His Gln Ser Gly Asp His Lys Arg Lys Ser Asn Pro
165 170 175
Thr His Tyr Arg Glu Pro Arg Phe Tyr Thr Lys Ile Phe Lys Glu Cys
180 185 190
His Met Gln Asp Asp Ser Gly Asn Ser Tyr Glu Leu Ser Leu Ile Gly
195 200 205
Cys Lys Cys Ile Gly Ala Tyr Val Lys Ser Lys Lys Asn Gln Asn Gln
210 215 220
Ile Ser Trp Leu Trp Gln Lys Val Asp Ser Glu Asp Asp Lys Gly Phe
225 230 235 240
Gln Arg Phe Leu Asp Ser Ser Gln Tyr Lys Phe Asn Ser Ile Leu Arg
245 250 255
Tyr Glu Arg Val Phe Gly Pro Gly Tyr Val Ser Thr Gly Gly Leu Glu
260 265 270

Thr Thr Lys Glu Phe Val Ser Lys Leu Asp Leu Lys Pro Gly Gln Lys
275 280 285
Val Leu Asp Val Gly Cys Gly Ile Gly Gly Gly Asp Phe Tyr Met Ala
290 295 300
Glu Asn Tyr Asp Val Glu Val Val Gly Ile Asp Leu Ser Ile Asn Met
305 310 315 320
Ile Ser Phe Ala Leu Glu Arg Ser Ile Gly Leu Lys Cys Ala Val Glu
325 330 335
Phe Glu Val Ala Asp Cys Thr Lys Lys Asp Tyr Pro Glu Asn Ser Phe
340 345 350
Asp Val Ile Tyr Ser Arg Asp Thr Ile Leu His Ile Gln Asp Lys Pro
355 360 365
Ala Leu Phe Arg Ser Phe His Lys Trp Leu Lys Pro Gly Gly Lys Val
370 375 380
Leu Ile Ser Asp Tyr Cys Lys Ser Ala Gly Thr Pro Ser Ala Glu Phe
385 390 395 400
Ala Ala Tyr Ile Arg Gln Arg Gly Tyr Asp Leu His Asp Val Lys Ala
405 410 415
Tyr Gly Lys Met Leu Lys Asp Ala Gly Phe Val Glu Val Ile Ala Glu
420 425 430
Asn Arg Thr Asp Gln Phe Ile Gln Val Leu Gln Lys Glu Leu Asp Ala
435 440 445
Leu Glu Gln Glu Lys Asp Asp Phe Ile Asp Asp Phe Ser Glu Glu Asp
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Tyr Asn Asp Ile Val Asp Gly Trp Lys Ala Lys Leu Val Arg Thr Thr
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<211> LENGTH: 1120
<212> TYPE: DNA
<213> ORGANISM: Spinacia oleracea
<400> SEQUENCE: 3

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ctgcgttttc acgcacatta atctcaccta ttttctagct tcttcatttt ctcaatcaat 240
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cataaatggg cattacaaaa atgtgaagtt tatgtgtgct gatgtgacat ctccaagtct 600
caacatttca ccaaattccg tggatatcat attctccaat tggctactca tgtatctttc 660
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cattttcttc agagaatctt gttttcatca atcaggagat cacaagcgca aaagcaatcc 780
aacccactac cgtgaaccta ggttctacac caagatcttc aaagaatgcc atatgcaaga 840
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caaaagcaag aagaatcaga accagataag ctggttatgg cagaaagttg attcagagga 960
tgacaagggg ttccagcgat tcttggattc tagtcaatac aagtttaaca gcatactgcg 1020

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<211> LENGTH: 289
<212> TYPE: PRT
<213> ORGANISM: Spinacia oleracea
<400> SEQUENCE: 4

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20 25 30
Leu Asp Ser Gln Ala Ser Asp Leu Asp Lys Val Glu Arg Pro Glu Val
35 40 45
Leu Ser Met Leu Pro Pro Tyr Glu Gly Lys Ser Val Leu Glu Leu Gly
50 55 60
Ala Gly Ile Gly Arg Phe Thr Gly Glu Leu Ala Glu Lys Ala Ser Gln
65 70 75 80
Val Ile Ala Leu Asp Phe Ile Glu Ser Val Ile Lys Lys Asn Glu Ser
85 90 95
Ile Asn Gly His Tyr Lys Asn Val Lys Phe Met Cys Ala Asp Val Thr
100 105 110
Ser Pro Ser Leu Asn Ile Ser Pro Asn Ser Val Asp Ile Ile Phe Ser
115 120 125
Asn Trp Leu Leu Met Tyr Leu Ser Asp Glu Glu Val Glu Arg Leu Val
130 135 140
Glu Arg Met Leu Lys Trp Leu Lys Pro Gly Gly Tyr Ile Phe Phe Arg
145 150 155 160
Glu Ser Cys Phe His Gln Ser Gly Asp His Lys Arg Lys Ser Asn Pro
165 170 175
Thr His Tyr Arg Glu Pro Arg Phe Tyr Thr Lys Ile Phe Lys Glu Cys
180 185 190
His Met Gln Asp Asp Ser Gly Asn Ser Tyr Glu Leu Ser Leu Ile Gly
195 200 205
Cys Lys Cys Ile Gly Ala Tyr Val Lys Ser Lys Lys Asn Gln Asn Gln
210 215 220
Ile Ser Trp Leu Trp Gln Lys Val Asp Ser Glu Asp Asp Lys Gly Phe
225 230 235 240
Gln Arg Phe Leu Asp Ser Ser Gln Tyr Lys Phe Asn Ser Ile Leu Arg
245 250 255
Tyr Glu Arg Val Phe Gly Pro Gly Tyr Val Ser Thr Gly Gly Leu Glu
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275 280 285
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<210> SEQ ID NO 5
<211> LENGTH: 11
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
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OLIGONUCLEOTIDE
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<223> OTHER INFORMATION: Description of Artificial Sequence: SYNTHETIC
OLIGONUCLEOTIDE
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VERIFICATION SUMMARY
PATENT APPLICATION **US/09/525,885**

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